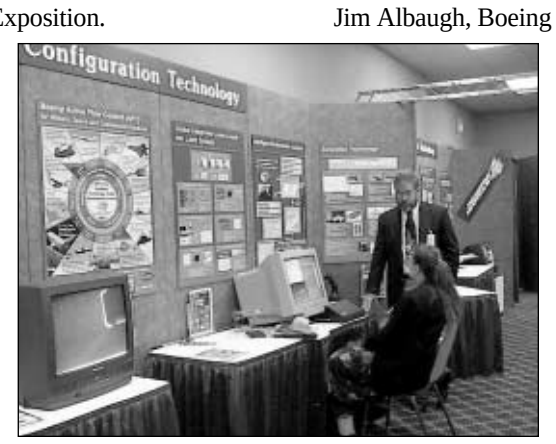
The Boeing Company hosts Technology Exposition and Exchange

A unique opportunity is being offered to acquaint NASA employees with the space-related programs, technologies and process innovations of The Boeing Company that are available to support Johnson Space Center (JSC) programs and missions. On April 4 - 5, Boeing will host a Technology Exposition and Exchange at the JSC Gilruth Center. This Technology Exposition is focused on aerospace programs and technologies for the Space Shuttle, International Space Station, human exploration of space and other JSC initiatives.

The Exposition will provide an opportunity for government employees to review internal Boeing Independent Research and Development projects, as well as contracted R&D from other government agencies. More than 200 display boards depicting Boeing products, technologies and best practices, along with various demonstrations, models, hardware and videos, will be exhibited. Select briefing sessions also will be held during the Exposition.

"We believe this event will provide a great opportunity for Boeing to present its new technology initiatives and product innovations to your technical and operational organizations," said Mike Mott, Boeing vice president and general manager, Human Space Flight & Exploration. "It also will demonstrate our capabilities and future strategic direction in these key areas."



Volunteers staff a table at a recent Technical Exposition between Boeing and the United States Air Force Space and Missile Center.

Jim Albaugh, Boeing president, Space and Communications Group, and Dave Swain, Senior vice president, Phantom Works, will participate in the two-day event to discuss the investment and commitment of The Boeing Company in technology advancement.

This interchange is in conjunction with Boeing Phantom Works, the advanced research and development unit of The Boeing Company. Its mission is to provide innovative breakthroughs that significantly reduce the cycle time and cost of developing and producing aerospace products while improving quality and performance. Boeing held a successful exposition at the Air Force Space and Missile Systems Center in El Segundo, Calif. last year. These expositions were developed to replace the previously mandated Independent Research and Development reviews held either at the contractor's facility or at customer sites.

Editor's note: The content of the Exposition contains Boeing proprietary information. The event is closed to the public and open only to U.S. Government personnel, (U.S. citizens only; foreign nationals prohibited). ■

Competition has students building robots and skills

by Dennis Wells

Excitement was high at this year's Texas Computer Education Association (TCEA) robotics contest held at the Austin Convention Center on Feb. 7.

Thirty-eight teams from around Texas competed in the grade 5 through 8 competition. Many high school teams in grade 9 through 12 also competed in a separate category. JSC's education outreach program provided mentoring for Friendswood's two Windsong Intermediate teams. One of those teams remained undefeated to take the top spot in relentless competition, and also defeated the first place Westbury high school's team robot in an exhibition round.

The two Windsong Intermediate teams smile proudly while they hold their awards on stage.

Windsong's sister school, Bales Intermediate, competed, taking home third place honors, and Houston's Shlenker Private School earned second place honors.

"I was so proud of them, and they are so pumped up," remarked Judy True, one of the two Windsong teachers responsible for guiding their effort.

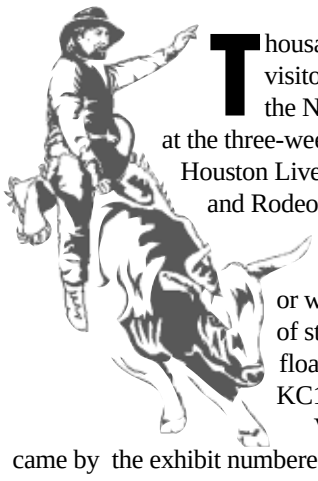
The students were challenged to build and program an autonomous robot using a Lego® based micro-controller, light and contact sensors, and an array of mechanical components. The object of the competition was to push seven weighted aluminum soda cans outside of a circle marked with black tape in two minutes. Higher points were scored for leaving the cans upright, moving them faster than your opponent, and moving your opponents' cans also.

But the goal of the event was far more than the simple joy of competition. By producing competitive autonomous robots using limited resources and time, students rapidly developed skills in mechanics, strategy, computer programming and teamwork. Though the effort was truly intense and grueling at times, none of this was apparent on the faces of the participants. Success for them in this learning experience could already be declared before the first competitive round.

Through many hours of after-school development, these sixth grade students developed and programmed their robots. They tested, changed, and tested again to perfect them. They learned not only from the building and programming, but also from designing strategies for the competition.

Like any competition, however, this one had its share of unexpected difficulties. Lighting conditions, can arrangement and weight, as well as opponent strategies, presented surprise challenges to the students upon arrival at the contest. Adapt was their call for action. But with excellent advice from Terry Chalene, Windsong's teacher lead and secret weapon at the competition, their actions were measured. They had the wisdom of their experience of hundreds of "small" changes with unexpected results to temper their decisions. Many of them had not previously experienced the constraints or strengths of this kind of team effort. In the end, win or loose, they all felt a sense of accomplishment, and demonstrated excellent attitudes. ■

Volunteers spread NASA message to thousands at Rodeo



Thousands of visitors stopped by the NASA exhibit at the three-week long Houston Livestock Show and Rodeo to take a picture in an astronaut suit or watch a video of students floating on the KC135.

Visitors that came by the exhibit numbered somewhere between 13,000-18,000. "I considered it a resounding success," Hazel Fipps-Mann, Community Outreach Coordinator at JSC, said. "We were able to get the NASA message out to about 15,000 people."

According to Fipps-Mann, it is essential to let people know how important their support is for NASA. Also important is letting people know that JSC is a part of this community. To get the message out, NASA bags were given, filled with colorful flyers for Open House and Space Center Houston, along with bookmarks that provided information on educational programs.

The exhibit was smaller this year, the fifth straight year that JSC has been at the HLS&R. Shrinking from 7,500 to 900 square feet, the smaller exhibit was easier to manage, said Louis Parker, Exhibits and Displays Public Affairs Officer.

The smaller size did not mean anything was left out. There was a wealth of information available for the guests.

Technology transfer items were on display, such as the hand-held vacuum. This item signified the rechargeable cordless tools that are common today, and based upon the drill developed for NASA to use on the moon. Smoke detectors, which were first created for use on NASA's Skylab, as well as a foam neck pillow, developed for NASA pilots during testing, were also featured.

The Virtual Astronaut computer simulation was a stopping point, as was the interactive kiosk, "What's Up In Space?" that asked general questions about spaceflight.

Video screens and a television were mounted for easy viewing, while a model of the X-38 hung on a truss structure.

On weekends, astronauts volunteered to come and sign autographs and meet with the public. Fipps-Mann said they are a wonderful representation of not only the Astronaut corps, but of NASA as well. She added they never fail to impress with their graciousness and patience.

The exhibit could not have worked without the volunteers from JSC, Rayethon and Boeing. Some volunteers could use the time they worked to accrue credit hours or comp time, while others used their vacation time to staff the exhibit. Volunteers return year after year to work at the rodeo.

"Being a representative of NASA to the public is always extremely gratifying," Fipps-Mann said. "For many people, it is their only time to get to talk to people about what they do here and the overall NASA effort." ■

NASA JSC 2001e05520 Photo by James Blair

Astronaut Rick Linnehan signs autographs for visitors to the NASA booth at the rodeo.